SELECTION OF LUMBER FOR FARM AND HOME BUILDING

A radio interview between R. P. A. Johnson, Forest Products Laboratory, U. S. Forest Service, Madison, Wisconsin, and Everett Mitchell, NBC Announcer, Broadcast Friday, September 16, 1938, during the U. S. Department of Agriculture period of the National Farm and Home Hour by a network of 90 stations associated with the National Broadcasting Company.



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MORSE SALISBURY:

And now we'll have some information from a man who knows all about houses, and farm buildings. Mr. R. P. A. Johnson, engineer with the United States Forest Products Laboratory, will tell us what's the matter with a house when the foundation starts to decay -- when doors and window frames don't fit. He's also going to tell us how to select the lumber for new buildings. For this part of the program, we take you back to Chicago.

EVERETT MITCHELL:

And here we are, all ready to find out how we can fix up the old home place. Mr. Johnson, last month after I left that wonderful Laboratory of yours up in Madison, Wisconsin, I thought of two or three dozen questions I'd like to ask.

R. P. A. JOHNSON:

You mean -- in addition to the hundred and fifty you asked while you were in Madison?

MITCHELL:

Sure! I was just getting warmed up ! Now here's my list. I warn you-- they're not easy!

JOHNSON:

Go ahead. Shoot. I'll do my best.

MITCHELL:

Mr. Johnson, you believe, I believe, that wood has a leading place in the modern housing of America.

JOHNSON:

I do. Absolutely.

MITCHELL:

Is there plenty of lumber?

JOHNSON:

Plenty of lumber. Plenty of good lumber. Plenty of trees to supply more lumber -- if you give the trees half a chance.

MITCHELL:

That's the forestry angle. Now, in the strictly modern type of housing, you feel that lumber has an essential place?

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JOHNSON:
You mean modern, or moderne?

MITCHELL:
You've got me there! What do you mean -- moderne?

JOHNSON:
Wide, low; flat roofs; corner windows, and so on. But the principles of good construction -- wood construction -- apply just the same, regardless of the type of architecture. We've just inspected 600 new houses in 20 States in the East and South. Most of these houses are strictly modern and up to date. Among them are a few of the so-called moderne.

MITCHELL:
Were all the 600 houses built according to the -- the principles of good construction?

JOHNSON:
Most of them. Contractors and builders were doing a good job, and we found little of the so-called jerry construction; that is, deliberate attempts to cut corners for increased profit regardless of damage to the house. What we found was that an otherwise well built house would sometimes have a weak point. A weak point that would cost plenty in the long run.

MITCHELL:
Where -- in what part of the house, were you most likely to find these weak points?

JOHNSON:
Well, I would say porch columns, and rails. Ever notice that when a carpenter does a repair job, he's generally replacing a porch post, or steps?

MITCHELL:
Why yes I have, now that you mention it. As a rule, the post, or the steps, are decayed.

JOHNSON:
They have wet feet. Water collects between the bottom of the post and the slab or floor on which it rests. That's what we call a moisture pocket. Water can get in easily, but is slow to dry out. To the fungus that causes decay, that's meat and bread.

MITCHELL:
Duck soup, eh? What can you do about it? After all, the post has got to rest on -- something.

JOHNSON:
Well, let it rest on a special metal stool, made for that purpose. They've been used for over 100 years. That's the best remedy. Or you can provide a ventilating slot at the bottom of the post.

MITCHELL:
I'll take the special metal stool. Now tell us where else a home owner should look for weak points.

JOHNSON:
Doors, windows, corners -- anywhere there's a break in the protective armor of the house. Remember this: Water and air are always trying to break in.

MITCHELL:
They break in through the windows all right. Now suppose it's a cold winter night, and I settle down for a little rest, comfort, and enjoyment -- to read the paper. Presto! A cold draft from the windown hits me in the neck. I get up and latch the window, tight. But the window curtain still waves and billows. Who -- or what -- is guilty?

JOHNSON:
Not the wood. That cold draft on your neck is due to poor fitting of window frames, and failure to caulk or fill in around the window.

MITCHELL:
Any reason why windows shouldn't fit right?

JOHNSON:
No reason at all. Probably nowhere else in a house can a little care, and practically no cost, give you as big returns. Even if you insulate no other part of the house, insulate the space around the windows.

MITCHELL:
Will that stop the water from leaking under the window and staining the wall finish?

JOHNSON:
No. That's a different problem. Insulation keeps out air, not water. To keep out water, you need metal flashing over the windows, building paper that covers all joints, and siding fitted into the window sill.

MITCHELL:
All right. Now the corners. I haven't noticed any special trouble in the corners of a house.

JOHNSON:
That's just the trouble with corners. Few people ever notice what happens. But either air or water can enter at a corner if it's not properly built. If water gets in, the paint may peel off the siding.

MITCHELL:
So a new paint job is the answer?

JOHNSON:
No, the new paint will peel just like the old, unless the corner joint is made tight.

MITCHELL:
I can see right now, the more questions I ask the more work I'll have to do on my own house -- but I'm game. How do you define a good corner?

JOHNSON:
In a good corner, where miter joints are used, they should fit tight and be primed with white lead. If you use corner boards, the siding should fit against them tight, and be backed with building paper. Then there are metal corner flashings that are good.

MITCHELL:
Well now, suppose I keep the corners tight, and the siding well painted. Will that prevent decay?

JOHNSON:
Not always. You may find decay starting in other places. And besides, paint won't stop decay. Your siding is bound to decay, if it's in contact with wet soil.

MITCHELL:
It all sounds pretty hopeless to me. Is it possible to prevent decay?

JOHNSON:
Sure it is. There's just one simple rule. Follow this rule, and you can prevent all decay and make wood last indefinitely.

MITCHELL:
Better give me that rule -- in words of one syllable.

JOHNSON:
Here it is, in six words: Use dry wood. Keep it dry.

MITCHELL:
Use dry wood. Keep it dry.

JOHNSON:
That's the rule to prevent decay. Provide drainage to carry water away from the wood. Provide ventilation to dry out the wood when it has been wet, and to remove damp air.

MITCHELL:
Well, that ought to take decay out of the picture. What about a house where the floor settles, along the baseboard, so you can see a long strip of unpainted wood, originally covered by the molding?

JOHNSON:

Sounds like a plain case of shrinkage, due to the use of wet joists, when the house was built. Usually, builders are very careful about the dryness of interior finish and flooring, but they often discount the importance of properly dried framing. If you want your floor and walls to stay put, see that all the lumber that goes into your house is dry. You can get dry lumber if you insist.

MITCHELL:

Mr. Johnson, I wonder just how much the average citizen knows about lumber. Isn't this grading and moisture business, for all kinds of wood -- Don't you think it's confusing?

JOHNSON:

Why no, I don't think it's confusing. The lumber manufacturers are trying to make it simple and understandable. Our work at the Laboratory is helping. The principle is to pick the kind and the grade of lumber that will give you the service you need, and not cost too much.

MITCHELL:

That might take a lot of picking-out.

JOHNSON:

Not so much. What you want is strong wood where strength is needed; good weather resistance and of course good appearance where the wood is exposed. Some clear lumber is necessary, of course, but not as much as many people think.

MITCHELL:

All right, suppose I want to build a wooden well-platform -- to take a concrete case.

JOHNSON:

Nothing concrete about that case.

MITCHELL:

Well, anyhow, it's a specific instance. How would you select the lumber, for a well-platform?

JOHNSON:

That's an exposed use, with lots of wetting, so I'd look for decay resistance and good bending strength. That gives me a choice of cypress, cedar, Douglas fir, western larch, and southern pine, among others, according to the price I pay on the local market. In these woods, the grade is No. 1 or No. 2 Dimension.

MITCHELL:

Simple. Simple as Einstein's theory of relativity. Where does the layman, like me, get off in questions like that?

JOHNSON:

We've worked it out, for all the ordinary farm and home uses of lumber in our Farmers' Bulletin No. 1756. We've sent out around 15,000 copies.

MITCHELL:

Make it 15,000 and one. (I'm the one.) Say, does your bulletin tell the earmarks of bum construction as well as good?

JOHNSON:

Yes, it does. I've got a copy of the bulletin here in my pocket. Just a minute, and I'll show you some examples of bum construction. Now here on page 22. See those pictures? Poor construction with foundations, window sashes and frames, siding and down spounts, porch columns.

MITCHELL:

Also, pictures of the right way to do it. This bulletin looks like just what I've been waiting for -- "Selection of Lumber for Farm and Home Building." Here's the whole story -- pine, Douglas fir, hemlock, cypress; house framing, siding, floors, barn sills, silos, windmill platforms -- the whole works, and how to avoid trouble. Any more bulletins where this one came from?

JOHNSON:

Several hundred copies, I understand.

MITCHELL:

Anybody who needs it can have a copy?

JOHNSON:

Sure. Write a card, and we'll send a copy.

MITCHELL:

Mr. Johnson, a lot of people besides me are going to thank you for this talk, and your bulletin.

JOHNSON:

We're always glad to oblige. What's the use of all the research we do at the Laboratory, unless it can be of actual benefit to the public?

MITCHELL:

Well, this bulletin will certainly be of benefit to the public that wants well-built houses, and well-built barns. Farm and Home friends, if you need a copy of this bulletin, "Selection of Lumber for Farm and Home Building," send your name and address -- now let's get this straight -- send your name and address to the Forest Products Laboratory, Madison, Wisconsin.